

AMENDMENT(S) TO THE CLAIMS

Claims 1-22. (Canceled).

23. (New) A method for refining aqueous suspended fibers, the fibers being one of paper fibers and pulp fibers, comprising the steps of:

leading the aqueous suspended fibers through at least one refining zone which is located between an inside wall of a rotating refiner drum and at least one refiner roll, said refiner roll
5 rotating in association with said refiner drum;

pressing said refiner roll and said refiner drum against each other thereby causing a mechanical refining force to be transferred to the fibers so that strength properties of paper produced therefrom are altered;

forming a fibrous stock layer on said inside wall of said rotating refiner by the aqueous
10 suspended paper fibers;

temporarily attaching said fibrous stock layer to said inside wall due to rotation;

supplying a continuous flow of liquid with the aqueous suspended paper fibers to said fibrous stock layer; and

discharging said liquid from said fibrous stock layer.

24. (New) The method of claim 23, wherein said refiner roll is equipped with bars whose axial extension relative to an axial extension of said refiner roll is at an angle (α) of between 0° and 45°.

25. (New) The method of claim 24, wherein said inside wall of said refiner drum is not equipped with refiner bars that engage between refiner bars of said refiner roll.
26. (New) The method of claim 25, wherein a relative speed between said inside wall of said refiner drum and said refiner rolls viewed in a circumferential direction of said refiner drum at a location where two refiner rolls are closest to each other in said refiner zone is adjusted to a maximum of 10% of a circumferential speed of said inside wall of said refiner cylinder.
27. (New) The method of claim 23, wherein said refiner roll and said refiner drum are pressed together with such force that line forces of between approximately 5 and 30 N/mm are created.
28. (New) The method of claim 27, wherein said line force is at least 15 N/mm.
29. (New) The method of claim 23, wherein said refiner drum is rotated with a circumferential speed of said inside wall of between approximately 20 m/s and 40 m/s.
30. (New) The method of claim 29, wherein said circumferential speed is approximately 30 m/s.
31. (New) The method of claim 23, wherein a centerline of said refiner drum relative to a horizontal position is adjusted to be an angle of between approximately 0° and 5°.

32. (New) The method of claim 31, wherein said centerline of said refiner drum is in a horizontal position.

33. (New) The method of claim 23, further comprising the step of continuously transporting the paper fibers within said fibrous stock layer in an axial direction from one end of said refiner drum to another end of said refiner.

34. (New) The method of claim 33, wherein the aqueous suspended fibers in a fibrous stock suspension are supplied through at least one pipeline that feeds into said refiner drum on one face side, said suspended fibers are refined and removed through at least one outlet opening on an opposite face of said refiner drum.

35. (New) The method of claim 34, wherein said fibrous stock suspension of said fibrous stock layer is supplied from at least two axially distanced locations inside said refiner drum.

36. (New) The method of claim 35, wherein said fibrous stock suspension is supplied through pipelines which discharge near said fibrous stock layer.

37. (New) The method of claim 35, wherein said locations are distributed uniformly along an axial extension of said refiner drum.

38. (New) The method of claim 23, wherein a refined paper fibrous suspension is removed from said refiner drum through at least one overflow opening which is located on at least one of a plurality of faces of said refiner drum.

39. (New) The method of claim 38, wherein said at least one overflow opening defines the thickness of said fibrous stock layer.

40. (New) The method of claim 23, further comprising the step of adjusting said fibrous stock layer to a consistency of between approximately 2 to 6% in said refining zone.

41. (New) The method of claim 23, wherein said refiner drum is a refiner cylinder.

42. (New) The method of claim 41, further comprising the step of axially transporting said fibrous stock layer along a length of said refiner cylinder by way of at least one transport device inside said refiner cylinder.

43. (New) The method of claim 42, wherein said transport device includes a stationary cross bar equipped with guide vanes that dip into said fibrous stock layer.

44. (New) The method of claim 42, wherein said transport device includes a stationary doctor bar equipped with guide vanes that dip into said fibrous stock layer.

45. (New) The method of claim 23, wherein said inside wall of said refiner drum is conical in form thereby defining a conical refiner drum.

46. (New) The method of claim 45, wherein said conical refiner drum has an inclined angle (β) of between approximately 1° and 5° .